

WHAT IS CLAIMED IS:

1. An all terrain vehicle comprising a frame, an engine compartment defined within the frame, an engine mounted within the engine compartment, the engine comprising a crankcase, a transversely extending crankshaft, a transmission connected to the crankshaft and disposed within a transmission chamber, the transmission comprising a drive pulley, a driven pulley and a drive belt connecting the drive pulley and the driven pulley, a transmission primary shaft connected to the drive pulley, a first end of the primary shaft supported by the crankshaft and a second end of the primary shaft supported by a support bracket, the support bracket connected to the crankcase, an air inlet adapted to permit entry of cooling air into the transmission chamber, an air guide configured to direct a flow of cooling air within the transmission chamber along the drive belt, wherein the air guide is connected to the support bracket.

2. The all terrain vehicle of Claim 1, wherein the air guide extends along at least a portion of the outside circumference of the drive pulley.

3. The all terrain vehicle of Claim 2, wherein the air guide extends along approximately one-half of the circumference of the drive pulley.

4. The all terrain vehicle of Claim 1, wherein the air guide is formed into a spiral from a first end of the air guide to a second end of the air guide relative to an axis of the drive pulley.

5. The all terrain vehicle of Claim 4, wherein a distance between the air guide and the drive belt increases radially from the first end to the second end.

6. The all terrain vehicle of Claim 1, wherein the support bracket further comprises a plurality of legs, a portion of each of the plurality of legs beyond the circumferential perimeter of the drive pulley extending inward toward the crankcase substantially parallel with the primary shaft.

7. The all terrain vehicle of Claim 6, wherein the air guide is connected to at least two of the plurality of legs.

8. The all terrain vehicle of Claim 6, wherein a rearward pair of the plurality of legs extend from the point of intersection at an obtuse angle from one another.

9. The all terrain vehicle of Claim 6, wherein the rearward pair of legs extend in a direction that is substantially perpendicular to a force exerted on the primary shaft by the drive belt.

10. The all terrain vehicle of Claim 6, wherein the plurality of legs further comprise a ribbed reinforcing portion, the ribbed reinforcing portion extending radially along the length of the plurality of legs.

11. The all terrain vehicle of Claim 6, further comprising a generally circular reinforcing member extending along the circumference of the support bracket and interconnecting the legs, the reinforcing member having a diameter substantially the same size as a diameter of the drive pulley.

12. The all terrain vehicle of Claim 11, wherein the reinforcing member further comprises a plurality of mounting portions configured to be connected to a transmission case.

13. The all terrain vehicle of Claim 6, wherein the legs further comprise a plurality of flanges, the plurality of flanges comprising a plurality of positioning holes, wherein the plurality of flanges are connected to the crankcase.

14. The all terrain vehicle of Claim 1, further comprising a transmission case, the transmission case comprising an inner and outer portion, the inner portion being configured to be connected to the crankcase and the outer portion being attached to the inner portion.

15. The all terrain vehicle of Claim 14, wherein the transmission case is made of a resin-based material.

16. An all terrain vehicle comprising a frame, an engine compartment defined within the frame, an engine mounted within the engine compartment, the engine comprising a crankcase, a transversely extending crankshaft, a transmission connected to the crankshaft and disposed within a transmission chamber, the transmission comprising a drive pulley, a driven pulley and a drive belt connecting the drive pulley and the driven pulley, a transmission primary shaft connected to the drive pulley, a first end of the primary shaft supported by the crankshaft and a second end of the primary shaft supported by a support bracket, the support bracket connected to the crankcase, an air inlet adapted to permit entry of cooling air into the transmission chamber, the support bracket including a means for guiding a flow of cooling air along at least a portion of the drive belt.

17. The all terrain vehicle of Claim 16, further comprising a transmission cover at least partially defining the transmission chamber.

18. The all terrain vehicle of Claim 16, wherein the means comprises an air guide for guiding a flow of cooling air along at least a portion of the drive belt.

19. The all terrain vehicle of Claim 18, wherein the air guide extends along the outside circumference of the drive pulley.

20. The all terrain vehicle of Claim 18, wherein the air guide forms a spiral along the outside circumference of the drive pulley from a beginning of the air guide to the end of the air guide.

21. The all terrain vehicle of Claim 20, wherein the air guide spiral shape increases radially from the beginning to the end.